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ENERGY TAXATION: ALTERNATIVE CONSERVATION TAXES

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In the area of energy taxation, taxes or tax incentives may be used to discourage the use of energy or to encourage more efficient use of energy. Such taxes can be either imposed on the use of a particular type of energy use (such as automobiles) or on excessive energy use. Another approach is to provide some form of tax incentive for energy conservation facilities, such as for the recycling of materials or for facilities which expand the supply of energy sources. This pamphlet presents possible taxes designed to decrease the demand for energy and possible tax incentive proposals designed either to increase energy supplies or to decrease demand. Other similar taxes or incentives could be developed.

I. Taxes To Conserve Energy

A. Automobile efficiency tax

An excise tax on automobiles could be developed to discourage the purchase of the types of automobiles that consume relatively more gasoline per mile. Such a tax might be related to the efficiency of the car as measured by miles per gallon—the greater the efficiency, the lower the tax. Mr. Vanik, for example, has introduced a bill (H.R. 9859, August 2, 1973) which imposes an excise tax that varies with specified miles per gallon brackets. Under this bill, no tax would be imposed on autos that obtain 20 or more miles per gallon. For other autos, the tax for the period July 1, 1976, through June 30, 1978, would range to $360 for cars that do not obtain more than 8 miles per gallon, and for the period July 1, 1978, through June 30, 1981, the rates would be twice as high, reaching a maximum of $720.

A similar proposal introduced by Senators Moss, Percy and Nelson, as a proposed amendment to H.R. 8214, has substantially higher tax rates. The maximum tax applicable to a vehicle which does not get over 10 miles per gallon is $480 for the first period and $1,435 for the period after July 1, 1978.

The efficiency in miles per gallon of a new car would be determined by the Secretary of Transportation under the Vanik bill and the Administrator of the Environmental Protection Agency under the Moss bill.

Taxes of this type can vary directly in dollar amount with gasoline consumption or the tax rates (applicable to the price of the automobile) can vary with the relative gasoline consumption.

The estimated revenue gain from the excise tax introduced by Mr. Vanik is $2.8 billion in 1976, declining to $600 million in 1980 as the sales of less efficient cars decline.

Arguments for.—An auto excise tax based on gasoline efficiency would discourage the purchase of automobiles that use relatively greater amounts of gasoline and thus contribute to reducing our de-

mands for petroleum products. Although consumers are currently reducing their purchases of large gas-using automobiles substantially, there is no guarantee that if gasoline should become more plentiful in the future, the automobile companies and consumers will not resume creating a market for large, inefficient cars.

Even if efficiency standards, such as those being considered by the Environmental Protection Agency are established, there is still need for a tax because it appears that the EPA favors setting an average mileage standard per manufacturer rather than requiring that all models meet a certain efficiency standard. This policy would permit automobile companies to continue to produce a significant volume of large, inefficient automobiles so long as they also produce more efficient autos as well.

In addition, even if standards were promulgated by the Environmental Protection Agency requiring auto manufacturers to meet certain efficiency standards by certain dates, it might be desirable to impose an excise tax prior to those dates to encourage the auto companies to reach those standards even more rapidly.

Arguments against.—It is likely that continued high prices for gasoline itself will provide sufficient encouragement so that the vast majority of automobiles produced, and purchased, in the future will be more efficient. If a few large, inefficient automobiles are produced, they may well be a small enough proportion of the total so that they will have an insignificant impact on total gasoline consumption.

If it is thought desirable to insure that automobile companies do not produce inefficient, low-mileage cars, a flat prohibition against the production and sale of such cars might be more acceptable to the general public.

B. Other similar taxes

The committee might wish to consider the imposition of excise or similar taxes on other energy users, such as pleasure boats, snowmobiles, recreational airplanes, etc.

C. Tax on use of electricity and natural gas

Taxes, essentially excise taxes, could be imposed on all uses, or all excess uses, of energy. Most frequently, the suggestions have been to limit the tax to the use of electricity, fuel oil, and natural gas. A tax could be imposed either on the use of fuel or source of energy; e.g., so much per kilowatt hour or so much per cubic foot of gas. Alternatively a tax could be imposed on the amount of energy in the excess of some base period average, for example, the excess over 85 percent of the prior year's use.

One tax of this type has been proposed in H.R. 12069 (Mr. Wright and others, December 20, 1973). The tax would be 1/10 of a cent per kilowatt hour for use in excess of 30,000 kilowatt hours per year. He estimated that this would yield $900 million per year. H.R. 12621 (Mr. Vanik) also provides a tax of this type.

Arguments for.—The purpose of a tax on energy use is obviously to discourage its consumption thus relieving pressure on scarce energy sources by reducing demand. The focus of the tax on excess energy use is designed to cut down increased energy use and discourage the marginal and presumably more wasteful use of energy, particularly if the tax were imposed at progressive rates.

Arguments against.—There is no need for an additional increase in price over and above the price increase on the energy source that results from its scarcity. The higher price provided by the market will discourage energy use, particularly wasteful energy use which can be cut back with a minimum detriment to the user.

Although a further price increase in the form of an excise tax might accelerate the transition to more efficient methods of energy use and discourage currently wasteful use, its major impact would fall on those who are "locked-in" to the current energy using equipment. They would thereby be forced to pay an additional tax which they would have very little chance of avoiding. In addition, the tax in all probability would be regressive.

Any tax of these types with a base period needs to be temporary because it becomes excessive as a result of normal growth. Moreover, it would apply unfairly to users who had eliminated waste in the base period and were unable to reduce consumption further.

II. Tax Incentives To Increase Supply or To Conserve Energy

A. *Recycling*

The amount of recycling of materials could be increased by increasing its profitablity either through tax incentives that would increase the profit from recycling of the product itself or through tax incentives for the acquisition or construction of equipment used in the recycling process.

One approach to providing tax incentives to recycle products is illustrated by H.R. 9467 (Mr. Burke, July 23, 1973, and numerous other identical bills introduced subsequently). This bill provides a tax credit of $10 for each ton of wastepaper recycled into new commercially marketable pulp paper or paperboard or other similar products. At 1973 levels of production using waste paper for recycling it is estimated that this credit would cost about $100 million a year.

Another approach illustrated by H.R. 5902 (Mr. Vanik, March 20, 1973, and a similar bill, H.R. 10888 by Mr. Fulton) would encourage the use of recycled oil by imposing a tax of 6 cents per gallon on virgin lubricating, hydraulic and cutting oils to make their prices and those of recycled oils competitive. The estimated revenue gain from this proposal is $20 million annually.

Still another approach is illustrated by H.R. 4627 (Mrs. Griffiths and numerous cosponsors, February 22, 1973). The bill would provide the purchaser of various recyclable materials an additional deduction from gross income equal to a specified portion of the purchase price. The purpose of the deduction is to increase recycling by increasing its profitability compared to the use of virgin materials. At 1973 levels of recycling, it is estimated that this would result in a revenue loss of about $500 million a year.[1]

Arguments for.—The argument for providing some tax incentive for recycled materials is that the price of these materials should be reduced (or the profit from their recycling should be increased) to encourage their production and use. In addition, it is also argued that the tax system currently provides tax incentives which encourage the use of virgin materials, for example, the capital gains treatment of

[1] Mrs. Griffiths' bill also provides 5-year amortization to solid waste recycling facilities. See the discussion of this device in "B," under "Rapid amortization" for new sources of energy.

timber and the depletion allowance on virgin minerals. These incentives have the effect of either reducing their prices (or increasing the profits from their exploitation) and encouraging greater use of these resources, than would be the case if no tax subsidy were provided. It is argued that to offset the incentive aspects of the existing tax incentives for virgin materials, it would be appropriate to provide equivalent incentives to the reuse of scarce raw materials. It is emphasized that the tax system operates perversely in this area because it bases the depletion rate on the value of the scarce resource, thus encouraging the rapid use of more valuable and irreplaceable resources. It is further argued that in some of these areas, a relatively small price differential which could be achieved through a tax incentive would be sufficient to encourage a substantial increase in the use of recycled or reprocessed material.

Finally, the use of recycled materials in most cases results in considerable energy savings when compared to virgin materials. For example, producing steel from scrap requires only 25% of the electricity that is needed to produce the same amount of steel from virgin materials.

Arguments against.—The principal arguments against the use of tax incentives for the recycling of selected products is that to the extent virgin materials are scarce, their prices will rise and encourage use of recycled materials and products even without tax incentives. An increase in the level of recycling has already occurred for scrap steel and other metals, paper and other products.

In addition, since a substantial amount of recycling is already taking place and more investment in this area will occur in response to higher prices, any tax incentive would have a substantial "windfall" element in that a major portion of the tax reduction would go to investment which would have taken place even in the absence of the tax incentive. In other words, the additional investment per dollar of revenue loss is likely to be quite small. In principle, one could increase the efficiency of such a tax incentive by focusing it on "additional" recycling investment or activity, but as a practical matter it is difficult to segregate the new activity in many cases. In addition, if this is done claims will be made that those who were the initiators in the recycling were discriminated against.

Furthermore, it may be inappropriate to single out certain products for recycling tax incentives when relative prices and technology are undergoing rapid change. It may be that the development of substitutes will, for example, be more efficient than specific recycled materials but a tax incentive might discourage producers from switching to the substitute material by increasing the profitability of recycling.

Finally, it seems a questionable policy to provide a new "depletion allowance" to selected products when their prices have recently increased, and when the Committee is seriously considering an adjustment in the depletion allowance for oil because of similar increases in price.

B. Rapid amortization for new sources of energy

Under present law, 60-month, straight-line amortization is provided for installation of pollution control facilities (sec. 169), coal mine safety equipment (sec. 187) and freight cars and locomotives (sec. 184). Similar provisions were enacted during World War II and the Korean

War to encourage development of defense production facilities. Plants had to be certified by designated Federal authorities as meeting defense production needs in order to qualify.

Making this provision available to the construction of plants to produce new fuel supplies might well reduce their costs sufficiently to make them competitive with oil and natural gas at the prices that are expected to prevail three to five years from now. Pilot projects and demonstration plants have verified the technical feasibility of producing oil (in a form called kerogen) from shale and through liquifying coal and also of producing methane gas from coal. If this provision were enacted this session, investors would be stimulated to make plans and let contracts in the near future. As is the situation with the amortization provisions in present law, it has been suggested that rapid amortization be made available only for a limited period, such as 5 years. At the end of that time, Congress would then be able to review the effects of the provision and assess the need to renew it.

This provision could be made available for the entire processing or refining activity that converts shale or coal to oil and/or gas. However, in this connection the Committee might want to consider whether the amortization provision should be made available for the same activities for which percentage depletion is provided. This situation arises, for example, with respect to shale. Percentage depletion for oil shale may be taken on the value of the oil extracted from the shale after completion of all mining and processing activity, including the retorting process.

Arguments for.—Rapid amortization would be made available only for new technologies to produce new fuel sources for energy supplies. Even though well tested in pilot projects and demonstration plants, there are uncertainties with respect to techniques and costs under continuous, full-scale production that can be offset by the speedier recovery of capital costs with this provision. The net effect would be to make gas and oil from these sources more closely competitive with natural gas and crude petroleum. The number of different types of domestic fuel and energy sources would be increased, a major step toward the stated goal of self-sufficiency in fuel and energy.

If rapid amortization were made available only for 5 years, it could be contended that investors who were able to take advantage of the provision would have received an unfair advantage over competitors who enter the industry later. That financial advantage, however, would be offset by the cost-reducing benefits that follow normally as manufacturers and users of new equipment and processes make them more efficient. If cost savings do not materialize, Congress can then consider whether extension of the amortization provision is justified.

Arguments against.—An administrative organization would be necessary in order to certify that the facility or equipment properly qualifies for the amortization provision.

Uncontrolled market prices for oil and natural gas have risen substantially, and the equilibrium prices for these fuels when all prices are decontrolled are expected to remain at relatively high levels; e.g., $7 or $8 per barrel of crude oil. These prices in domestic and international markets for oil (and their equivalents for natural gas), the inability to meet all domestic demand from domestic sources, and the need for greater supply flexibility will act to keep domestic oil and gas prices at levels that are competitive for supplementary fuels. To

the extent that these probable market effects prevail, establishing this provision adds an unneeded tax incentive to the Code and provides a substantial windfall to its beneficiaries.

The investment credit presently is available for investment in equipment that would be used in plants that will refine oil shale or convert coal to oil or gas. In addition, ADR is available to shorten the period of the depreciation of plant and equipment, and accelerated depreciation techniques, such as double declining balance, may be used with the ADR. Rapid amortization may be an excessive grant of incentives in view of these provisions.

C. Rapid amortization for recycling facilities

Techniques have been developed to recycle municipal, household and commercial and office building solid wastes. The wastes can be shredded, glass and metals separated, and the rest supplied as fuel for furnaces of power plants and electric utilities. Pilot projects sponsored by EPA have demonstrated that a ton of fuel consisting of a combination of recycled solid wastes and coal has the BTU (British thermal unit) heat equivalent of two barrels of oil. In addition, a pilot project, under EPA sponsorship, has been undertaken to recycle garbage and sludge. Some experiments have demonstrated the technical feasibility of deriving methane gas from garbage through chemical processes.

H.R. 4627, introduced by Mrs. Griffiths and several cosponsors, would provide 5-year amortization for solid waste recycling facilities. The bill would cover all solid waste recycling which includes a substantial, on-going industrial waste recycling industry, as well as the solid wastes in municipal collections from households, commercial enterprises and office buildings.

Arguments for.—There is little recycling of municipal solid waste beyond various EPA projects. Most of it, however, has been undertaken to limited extent by local governments. Rapid amortization would encourage private firms to enter into the industry, and the expansion of the industry would provide fuel as an energy source and meet a substantial part of the municipal solid waste disposal problem. The net reduction in capital costs that rapid amortization provides would encourage the private investment that is needed.

Municipal governments theoretically could undertake this activity and sell the usable wastes, but they are operating under tight budgets that do not provide the flexibility they need to undertake these investments.

EPA believes that the provision should be made available only to private processors of municipal and consumer solid wastes. Industrial waste recycling has been a viable industrial activity, and those firms in the industry, if they were covered, would receive a windfall tax advantage that would not be reflected in the value of the additional metals recovered from new recycling.

Arguments against.—It would be difficult to restrict the provision to solid waste disposal only of municipal consumer and commercial wastes.

Broader coverage would provide a tax windfall for a well-developed industry solid waste disposal industry. In addition, new industrial solid waste disposal plants built with the benefits of rapid amortization would be given an unfair, competitive advantage over firms with plants built before availability of this provision. Furthermore, prices

of metals and minerals are experiencing long-run increasing price trends which also is increasing the prices of recycled metals and the profits earned in recycling industrial wastes.

D. Tax incentives for energy conserving home improvements.

Another area the Committee may wish to consider is tax incentives for homeowners who make energy conserving improvements. Several forms of such an incentive are possible and could be provided for any type of energy conserving adjustments the Committee thinks appropriate. For example, a deduction or a tax credit could be provided for all or some of the amount expended (probably with some upper dollar limit) for improvements in the energy using characteristics of the taxpayer's domicile. These improvements could be restricted to structural changes such as providing insulation or could include expenditures to convert existing heating (or cooling) systems to more efficient models.

For example, H.R. 11543 (Mr. Vanik, November 15, 1973) provides a tax credit for repairs or improvements of a taxpayer's residence which improves the thermal design of the residence. The credit in this bill is 100 percent of the eligible expenditures with no upper limit. At current levels of expenditures of this type the revenue cost is estimated to be $400 million with a $100 maximum; $800 million with a $500 maximum, and $100 million with a $1,000 maximum. If the credit is successful in increasing expenditures significantly, the Treasury estimates that a 100 percent credit with an upper limit of $100 would cost $800 million; a $500 limit would cost $2 billion; and $1,000 limit would cost $2.7 billion.

A somewhat different approach has been proposed as amendment number 649 to S. 2589, the energy bill, by Mr. Moss. This would provide a deduction rather than a credit for eligible expenditure limited to noncapital repairs or improvements which reduce heat loss for the taxpayer's residence. An annual limit of $1,000 is provided.

Arguments for.—Since a large amount of energy is wasted by inadequate insulation of homes and the use of less than optimal heating and cooling units, homeowners could contribute significantly to meeting national energy goals with the aid of incentives to make these desirable home improvements. A tax incentive would be particularly helpful in this regard since it would reduce the net cost of insulating the taxpayer's home or adopting more existing heating and cooling units.

Arguments against.—A tax incentive in this area is not necessary because taxpayers, in response to higher prices, can be expected to take the necessary steps in the area of home insulation or replacement of inefficient heating or cooling systems. Consequently, such tax incentives probably would produce little additional activity of this type that would not have taken place in its absence, and thus in large part represent a windfall to taxpayers who would have made these adjustments anyway and who generally have relatively high incomes. Thus, higher prices generally will provide a sufficient corrective market response and there is no need to encourage by special tax provisions every type of activity that might be desirable.